

Unit 5

Day 2

Factoring Using Integers - Part 2

$$18x^4 + 12x^2 + 2$$

$$\textcircled{B} 2(9x^4 + 6x^2 + 1) = 2(3x^2 + 1)^2$$

$$25x^2 - 10x + 1 - 4y^2$$

$$(25x^2 - 4y^2) + (10x + 1)$$

$$(5x - 2y)(5x + 2y) - 1(10x - 1)$$

$$\cancel{(5x - 2y)(5x + 2y)} \cancel{(-1)(10x - 1)}$$

$$(25x^2 - 10x + 1) - 4y^2$$

$$(5x - 1)^2 - 4y^2$$

$$(5x - 1 - 2y)(5x - 1 + 2y)$$

MORE CHALLENGING FACTOR BY GROUPING

1) $p^3 - 4q^2 + p^2 - 8q^3 =$

$$\begin{aligned} & (p^3 + p^2) + (4q^2 - 8q^3) \\ & p^2(p+1) + 4q^2(1-2q) \end{aligned}$$

$$\begin{aligned} & (p^3 - 8q^3) + (p^2 - 4q^2) \\ & \underline{(p-2q)}(p^2+2pq+4q^2) + \underline{(p-2q)}(p+2q) \\ & (p-2q)(p^2+2pq+4q^2+p+2q) \end{aligned}$$

MORE CHALLENGING DIFFERENCE OF SQUARES

$$1) \quad (3x-1)^2 - 49 =$$

$$(3x-1+7)(3x-1-7)$$

$$(3x+6)(3x-8)$$

$$3(x+2)(3x-8)$$

$$2) \quad (a+2)^2 - (2b+4)^2 =$$

$$[a+2+2b+4][a+2-(2b+4)]$$

$$(a+2b+6)(a-2b-2)$$

TRIAL AND ERROR?? NOT REALLY.

$$x^2 + 11x - 60 =$$

$$\begin{array}{r} -60 \\ \hline 15 \quad 4 \end{array} \quad (x + 15)(x - 4)$$

FACTOR BY GROUPING

1)

$$6a^2 - 23ab + 21b^2 =$$

$$\frac{(6a-9)(6a-14)}{3 \quad 2}$$

$$(2a-3b)(3a-7b)$$

$$\begin{array}{r} 126 \\ - + - = -23 \\ - \cdot - = +126 \end{array}$$

$$-9 - 14$$

$$\frac{-360}{-40 \cdot 9}$$

2)

$$24y^2 - 31y - 15 =$$

$$\frac{(24y-40)(24y+9)}{\cancel{8} \cdot 3}$$

$$(6y-10)(8y+3)$$

$$(3y-5)(8y+3)$$

HOMEWORK

Wksht #2 AND pg 42: 17-28